OKURATOPE PA, WAIMATE, BAY OF ISLANDS

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Abstract. The pa, Okuratope, near Waimate in the inland Bay of Islands district, is mapped and described. In January 1815, Okuratope was visited by the Rev. Samuel Marsden and J.L. Nicholas who have both left good accounts. At that time an estimated 200-300 people lived at the pa under the chiefs Hongi and Kaingaroa. The historical descriptions are used in interpretation of the archaeological evidence. A sequence of defensive arrangements is suggested.

Okuratope pa near Waimate North enters European history with the visit in January 1815 of Samuel Marsden and J.L. Nicholas in the company of chief Hongi, the joint occupier with his brother, chief Kaingaroa. Both Europeans wrote an account of what they had seen (Marsden 1932:97-100; Nicholas 1817 I:333-41, 349-56), Nicholas' being the more detailed and informative.

Because of its scenic and historic interest the site was acquired as a reserve by the Crown in 1928, the greater part of the land being held in Maori Land Court title by 66 shareholding owners. A narrow corridor for public access across the paddocks from Te Ahuahu Road, a turning off State Highway 1, north of Ohaeawai, was also bought from Mr. H.K. Hatrick and Mr. H. Mountain (*N.Z. Gazette* 1928:1133-4). A *wahi tapu* (burial ground) was subsequently taken out of the reserve at the request of the local Maori people (*N.Z. Gazette* 1929:125) and was fenced off. The purchase was the result of local interest: representations had been made in 1925 by the Waimate North Ratepayers Association, and the Scenery Preservation Board also recommended its acquisition. Okuratope has now been designated a Historic Reserve (*N.Z. Gazette* 1980:3326).

The pa was surveyed in 1932 by L.G. Kelly and his outline plan was reproduced in J.R. Elder's edition of Marsden's Letters and Journals (Marsden 1932:98). The site then and now is covered by heavy bush, mainly secondary growth. I first visited Okuratope with Mr. and Mrs. R. Lawn in April 1973 and quickly appreciated its remarkable qualities and the exceptional preservation of the defences and interior arrangements; here was an example of a ring ditch pa with an occupation securely dated to the early 19th century and closely linked with outstanding historical personages. The need for a detailed and accurate plan was obvious but the dense woodland raised difficulties that could not be overcome by an amateur. The first opportunity of professional assistance came ten years later when Dr Douglas Sutton initiated a three year scheme of excavation and field survey at Pouerua, Ohaeawai (Sutton 1982:183) and employed Janet Leatherby and Peter Morgan to survey the

crater pa and the extensive Maori field systems. Both had experience of similar archaeological field surveys in Europe and the Middle East and the quality of their work was impressive. With the consent of Dr Sutton, they undertook the survey of Okuratope for three weeks in February 1983, during a break in their employment at the nearby Pouerua complex of sites. Dr Anne Salmond of the Anthropology Department at Auckland University was keenly interested in the project and obtained funds for the survey from the University Research Committee.

The survey was carried out using a theodolite and a self-reducing telescopic alidade. "The method employed was to establish by theodolite a single three point base line running diagonally across the site. The distance between these three points was measured tacheometrically and checked by tape. Ten secondary station points were located with the telescopic alidade from points on the base line. All original drawings were done in the field at a scale of 1:250 and distances were measured tacheometrically, spot heights were taken with the alidade and contours were subsequently added." (J. Leatherby and P. Morgan pers. comm.).

Important discoveries made were an outer line of ditch and defensive scarp on the east side of the pa and an external palisade trench surrounding three sides of the enclosure as well as the remains of terracing and house sites on the ridge to the north west, none of which had been recorded by Kelly.

LOCATION (Figs. 1,2)

Okuratope is an inland pa (Fig. 1) some 20 km from the nearest point on the Bay of Islands coast and 15 km S.W. of Kerikeri (grid reference 368446). It is situated on the northern fringe of a densely populated area in prehistoric times, the Taiamai (Ohaeawai) district with its many Maori pa, including the fortified volcanic cones of Pouerua and Maungaturoto, and with remains of extensive areas of Maori cultivations. The area has close associations traditionally with the growing power of the Ngapuhi tribe in the 18th century, and with their expansion to the Bay of Islands coast in the early 19th century.

The pa itself was built on high ground flanking the upper valley of the Waitangi river at an elevation of over 187 m (600 ft), and towards the end of a spur between two of its tributaries, the Waikuku and Pakonga streams (Fig.2). The site chosen was a flat-topped knob, naturally well defended by very steep slopes. On the easiest line of approach along the ridge from the N.W., the fortifications were skilfully placed to take advantage of the junction of the narrowest part of the ridge with the head of a dry re-entrant valley from the Waikuku stream. To the S.E. the ground falls to a slight declivity before rising again eastwards towards Waimate and merging with the plateau beyond the stream heads.

Marsden and Nicholas' accounts show that they had reached the site from the Waitangi river valley. Their journey began on 9th January 1815 at Rangihoua pa. They travelled in Hongi's carved war canoe to the head of the Kerikeri inlet where they stopped for a hangi and Marsden walked to the falls (Marsden 1932:87; Nicholas 1817 I:321). They proceeded on foot up the river over level land covered in fern,

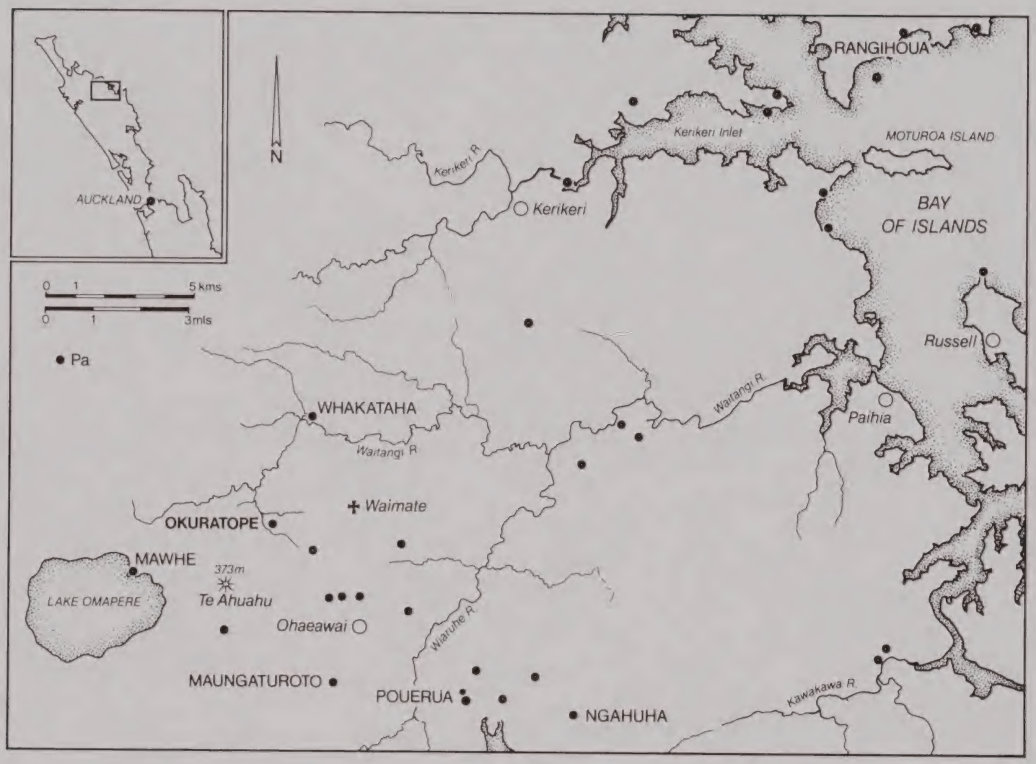

Fig. 1. Location map. Named pa are mentioned in the text; modern place names are in italics. Drawn by M. Rouillard.

crossing six small streams and then into a forest of tawa and totara and over the watershed to the Waitangi river (Nicholas 1817 I:329). They stopped for a meal at "Tariar's" (Tareha's) village on the west bank "with much rich land around it" (Marsden 1932:97). There was a pa belonging to the chief on a lofty hill behind it; this is probably Whakataha (Fig.1), a conspicuous feature in the landscape, now covered in dense bush (grid reference 386489), which was marked as Titore's Mount on NZMS 280 Bay of Islands, 1977. Marsden and Nicholas were carried across the river by the villagers; they then walked across "rugged stony country" for four miles (6.5 km). They passed chief Kaingaroa's plantations on the edge of the forest, finally ascending half a mile (0.8 km) through bush to the summit and arrived at Okuratope, which they knew as "the town of Wyemattee" (Nicholas 1817 I:332-3). The name 'Okuratope' was not mentioned by them. In 1830 the name 'Waimate' was used by Marsden for a native settlement "containing a number of different establishments belonging to different chiefs" (Marsden 1932:471, 473), and presumably refers to the district rather than the pa. Both Marsden and Nicholas commented on the strength of the position

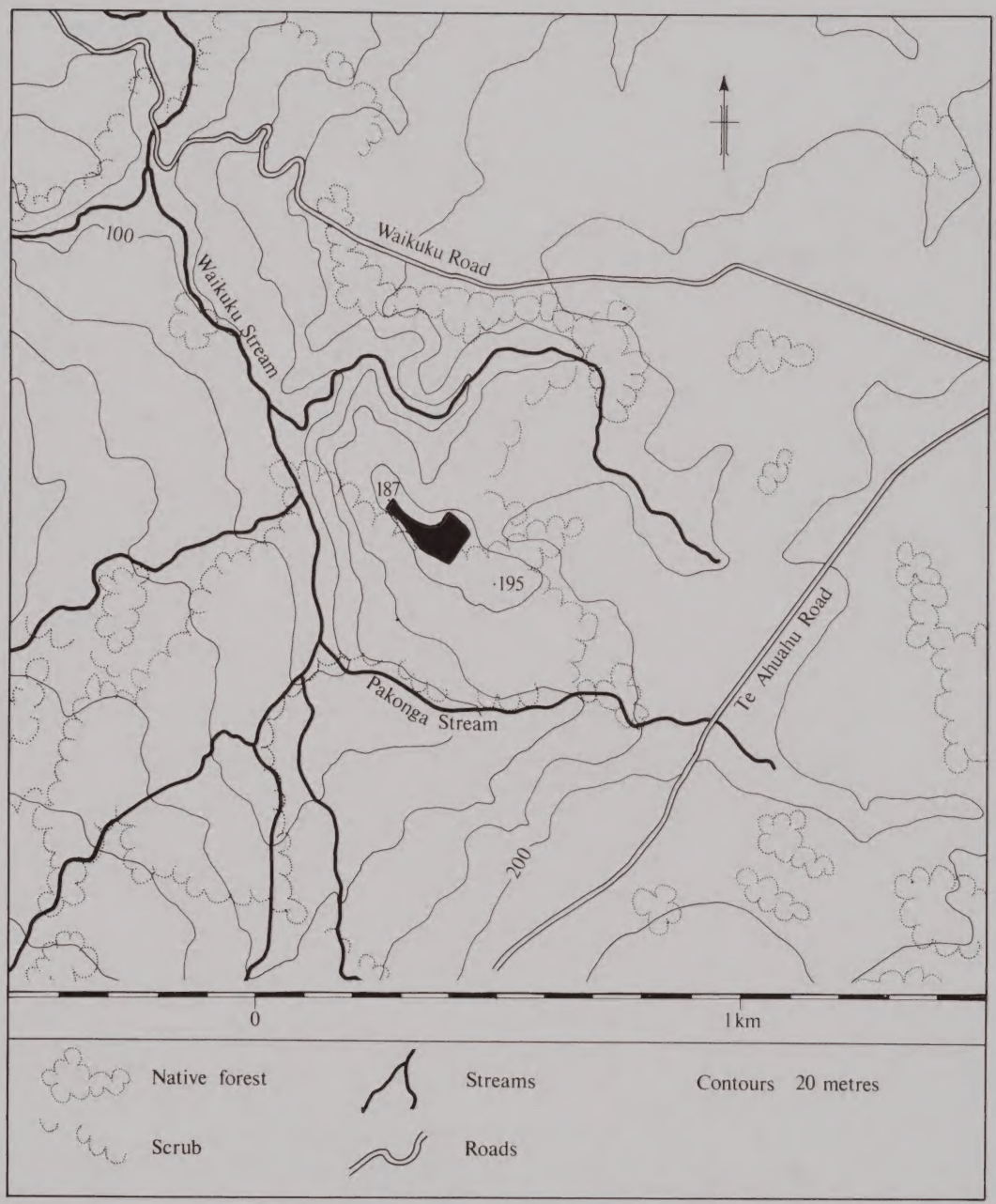

Fig. 2. Okuratope pa in relation to the topography. The area surveyed is shown in black. Drawn by J. Leatherby and P. Morgan.

whilst Nicholas (1817 I:335) added his appreciation of "the sublime scenery, the noble stately forest, the picturesque chequered hills and the distant bold and lofty mountains". The volcanic Te Ahuahu (373 m, 1227 ft) would have been clearly visible 3 km away in the absence of the present woodland (Fig.1).

Fig. 3. Okuratope, plan. Surveyed and drawn by J. Leatherby and P. Morgan.

Fig. 4. Okuratope, sections. See Fig. 3 for position.

THE DEFENCES (Figs. 3-5)

The fortifications are described under three headings, the summit enclosure, the cross-ridge defences, and the eastern defences. It is obvious from the complexity of the plan (Fig.3) that the work is of more than one period.

The summit enclosure

The rounded summit of the hill, rising to 190 m at X (Fig. 3) is defended by a continuous scarp 1-2.5 m long, an intermittent internal bank 0.5 m high above the scarp and a flat bottomed shallow ditch 2 m wide, which is discontinuous (Fig. 4). The defences are straightly aligned to form a five sided enclosure with rounded angles: the northern angle is missing, flanking a 15 m gap on the west side, probably the result of intrusive later terracing. There is also a slot for an external palisade 3-8 m in front of the ditch on the south-east, south, and west sides. This was a narrow trench about 0.5 m wide and more than 0.3 m deep, filled with leafy humus; when prodded by the discoverers, the surveyors, deeper soft patches were found, indicative of post holes. Other similar slots outside the cross-ridge defences had previously been tentatively identified by the writer from Nicholas' account (1817 I:336) of an external palisade and will be discussed later. Excavation is needed in several sectors to confirm these features, and to establish details of the constructions.

The summit enclosure was in effect a ring-ditch pa although the bank and ditch are not continuous and may have been unfinished. They were omitted for 22 m on the south side above the very steep hillside above the Patonga stream, although the ditch was dug at a reduced size around the western angle. The earthworks begin again where the slopes ease (Fig. 4, section X-B) and are continuous round the south angle and along the south-east side. Although the bank is present, only a short length of ditch, 10 m, exists on the east side, ending just short of a gap in the scarp, a possible entrance to the pa. Beyond this a shallow depression indicates that the ditch continued along the east side and has probably been filled in (Fig. 4. Section A-X). Excavation is needed here to test this hypothesis and to look for a causeway related to the gap. The ditch can be traced for 10 m beyond the north-east angle but then fades out above the steep terraced slopes at the head of the re-entrant valley to the north. It reappears as a short length (14 m) where the fortifications cross the ridge and the enclosure became more easily approached. It is highly probable that there was originally an entrance here flanked by the ditch end and in line with that through the cross-ridge defences (⩙ on plan Fig. 3, and discussion to follow). As previously noticed, there is a 15 m gap in the defences on the west side, probably due to the insertion of later small-scale terracing, which would have destroyed the other side of the conjectured entrance (see Fig. 5). The space, however, is covered by the external palisade at the crest of steep slopes. Again excavation is needed here to check whether the ditch was originally continuous and if not, to establish the position of the ends, and to test for post holes at the possible entrance.

There are five small gaps in the perimeter scarp, two on the south side 25.5 m apart, and one on each of the south-east, east and north sides; they are all narrow cuts, 0.75 to 1 m wide with eroded surfaces worn down into the natural soil (Figs. 3,6). Two of the five open into the ditch, the other three are continuations of the

elaborate system of gullies (sunk paths or drains?) dividing the interior (discussed below). Some gaps could have functioned as sally-ports, enabling the defenders to reach quickly parts of the external palisade that were under attack or to retire to new positions behind the scarp. All could have provided exits for surface water draining from the interior after heavy rain.

The cross-ridge defences (Figs. 3,4)

North of the summit enclosure, the ridge narrows, trending north-west and flanked by the steep slopes to the Patonga stream and to the head of the re-entrant; it is only 15 m wide between the scarps at its narrowest point, where the defences are situated. The conspicuous features are a broad ditch 4-5 m wide, and a pronounced internal scarp crowned by a bank 1.5 m high (Section D-X, Fig. 4). These defences cross the ridge and bend inwards on either side; on the west, they terminate on the steep slopes, on the east at what appears to be an entrance, 2 m wide between inturned scarps (Fig. 3). This passage-way lies below the ridge top and has not been previously identified as an entrance. Kelly accepted instead a narrow pathway that cuts diagonally across the scarp and descends into a broad, shallow portion of the ditch where the edges are ill-defined (Marsden 1932:98). The path has been much worn down and deepened by erosion; it is doubtful if it is a pre-European feature, though its origin is hard to account for. Excavation here is needed to test for a causeway in the ditch floor and to examine the new alternative passage-way for postholes.

Outside the transverse defences, there are many small rectangular enclosures on the ridge top and on the steep slopes at the head of the re-entrant (Fig. 3). Those on the slopes (8) are terraced, those on the ridge top (12) are defined by shallow gullies and minor scarps. If, as seems likely, they enclosed houses and cultivation patches, these would have hindered the defence, blocking the field of view and preventing easy access to the probable entrance. It can be deduced that these are later constructions, at a time when the pa was out of action. Originally there was a system of palisades on the ridge top which now can be discerned with difficulty in the undergrowth. The palisade slots are narrower and deeper than the gullies defining the enclosures; there are three possible parallel lines of slots across the ridge and one lateral above the steep western slopes. The first line is 15 m away from the outer edge of the ditch, the second 25 m away: both are short lengths that also form a side of an enclosure. The third line is 33 m away and has a small triangular enclosure abutting on to it. There is no reason why the three lines should be contemporary; once more, excavation is needed to test their character and the relationship of lines 1 and 2 with the enclosures.

The eastern defences (Figs. 3,4)

On the east side of the summit enclosure, the ground slopes steeply and steadily in thick scrub with a fall of approximately 1 in 4 below the filled-in ditch; it has been terraced and sub-divided in an irregular fashion, indicative of occupation (Fig. 3). Where the slope eased, a strong line of transverse defence was constructed across the shoulder of the hill. It consisted of a ditch 2.5 m wide, an internal scarp and an external palisade slot 5-7 m in front of the outer edge of the ditch (Section A-X, Fig. 4). There was an entrance near the south-eastern end approached by a causeway

across the ditch but screened by the palisade (see Fig. 3); attackers would have been trapped in the passage between the ditch and the palisade before they could turn to reach the gate. There was perhaps a postern or sally-port south of the main gate where the defensive scarp is sharply angled and inturned, leaving a narrow gap between it and the end of another palisade slot coming downhill from beside the inner enclosure. The position is obscured by undergrowth and needs clearing and testing by excavation. Other possible defensive features are four shallow rectilinear depressions close behind the outer palisade slot (Fig. 3), these could be the remains of rifle pits. Both the ditch and associated palisade ended on the steep side of the northern re-entrant but the defensive scarp turned westward and continued for about 30 m along the side of the re-entrant, presumably to prevent any infiltration from the easier slopes to the east.

The defensive sequence (Figs. 5,6)

The archaeological evidence for the construction of the defences will now be summarised and then discussed in the light of the observations made by Nicholas and Marsden in 1815. The primary construction must be the summit enclosure, a ring-ditch pa, with a defensive scarp and intermittent bank and an entrance partly destroyed on the north side and another likely on the east (Fig. 5). In all probability the enclosure was screened by palisades along the west and south facing slopes. The strong transverse defences designed to block the easy line of approach to the pa from the north-west along the flat crest of the ridge are presumably contemporary or perhaps a slightly later addition. The entrance was in alignment with that conjectured for the summit enclosure. In the second phase of construction, most of the east-facing ditch of the summit enclosure was filled in and replaced by a stronger and transverse defence 20 m downhill (Fig. 6). This included an external palisade and a causeway entrance near the south-east end, supplemented by a possible postern. At this time there was an external palisade enclosing three sides of the summit enclosure as well as its eastern extension. It can be inferred that the main approach was now from the south-east, round the shoulder of the hill from the Waimate plateau rather than from the north-west along the ridge. The narrow gaps in the scarp of the summit enclosure seem likely to be secondary since they weakened the defence. However once the pa was enclosed by an external palisade these may have functioned as exits used in conjunction with the gullies (sunk paths) in the interior. The gap on the east side would have provided convenient access from the new outer enclosure, utilising a sunk path uphill across the intervening terraces and proceeding along the line of the filled-in ditch (Fig. 3).

During the last phase of occupation the original defences were partly put out of action: the northern entrance to the summit enclosure was replaced by three small scarped plots, and the way to the outer entrance through the cross-ridge defences was similarly blocked. There was considerable overspill along the ridge and at the head of the re-entrant, mainly in the shape of terraced cultivation plots but also some probable house sites with rua pits. These would have prevented the cross-ridge defences from functioning effectively. It is obvious that the inhabitants no longer feared an attack from the ridge and that the ceremonial approach to the pa was by way of the east entrance.

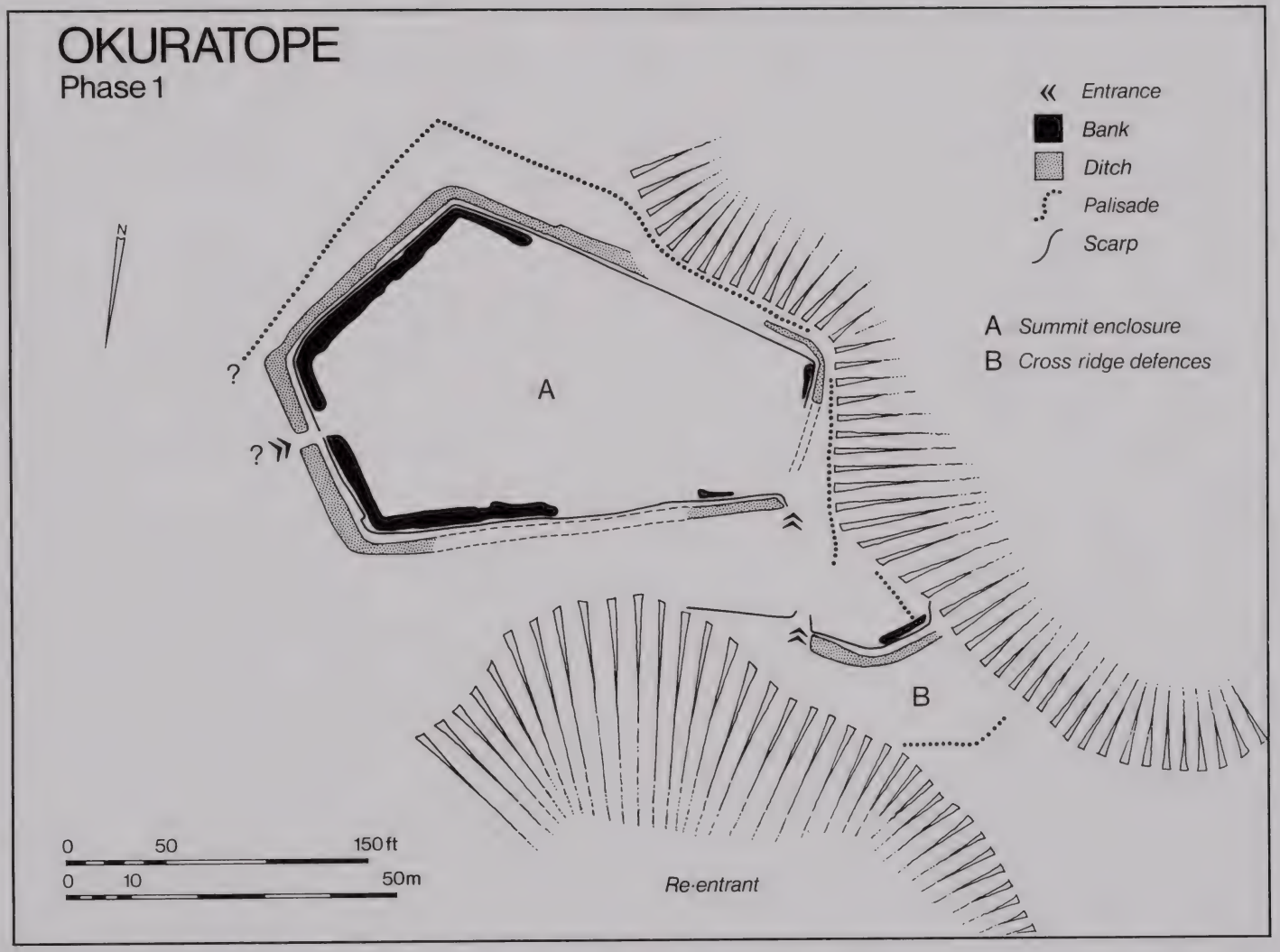

Fig. 5. Diagram plan, Okuratope, phase 1. Drawn by M. Rouillard.

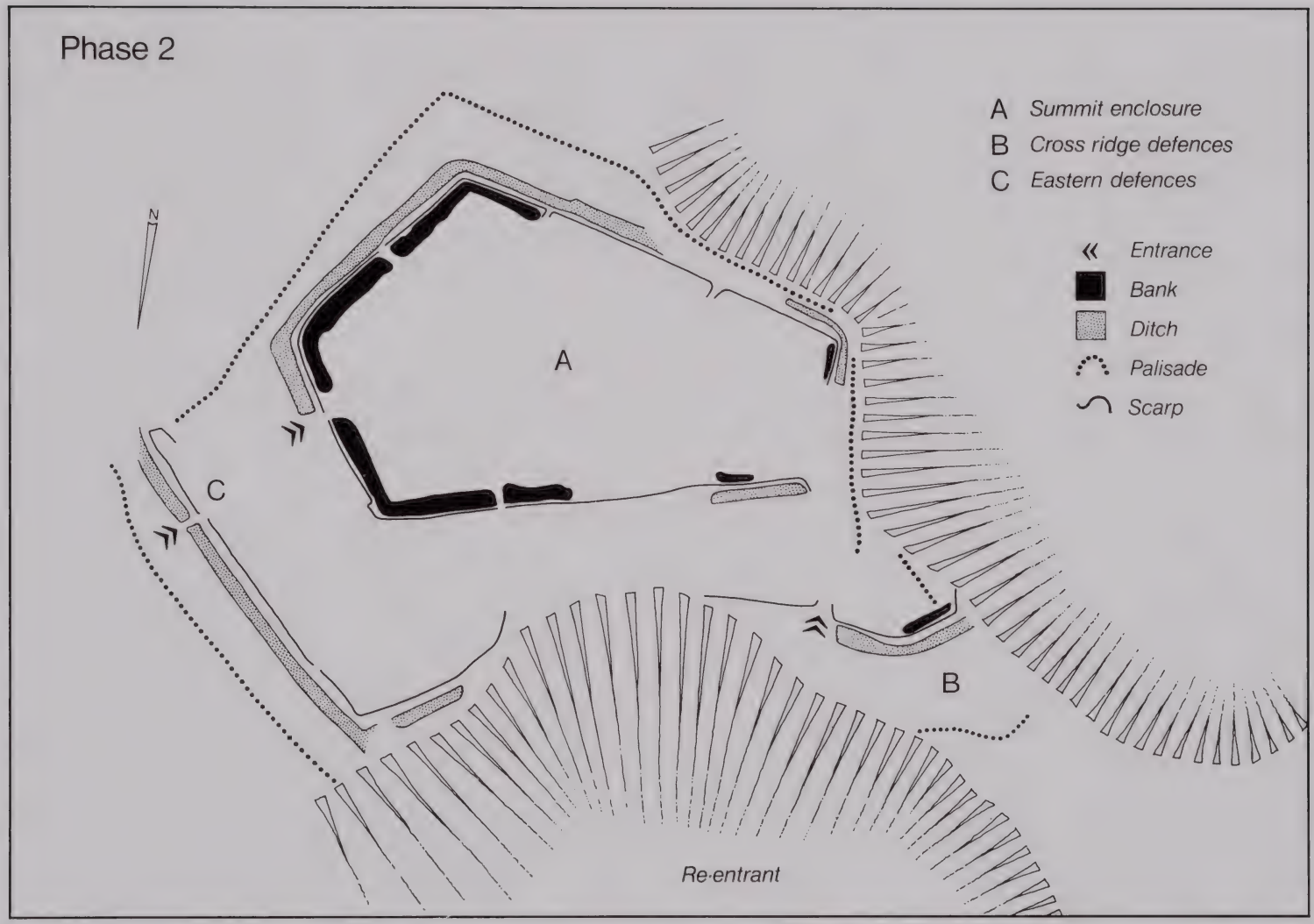

Fig. 6. Diagram plan, Okuratope, phase 2. Drawn by Mr Rouillard.

It now remains to compare the pa defences as described with those seen by Marsden and Nicholas in 1815. Nicholas' description is detailed and explicit (1817 I:336-7); he was impressed by the skill and ingenuity displayed in their construction. "The first bulwark that encompassed the town" was a strong palisading of close-set heavy posts, some 20 ft [6 m] high. It had a backing of strong wickerwork "to obstruct the lances of their enemies" as well as port-holes for musket fire. There was an entrance through this palisade which was 5 ft [1.5 m] high and 2 ft [0.6 m] wide, decorated externally with carved savage-looking heads. There was then a space of about 30 ft [9 m] to "a moat" 9 ft [2.7 m] wide backed by a steep mound on which there was another line of palisades. "The moat defended an entrance formed by another postern. Between this and the last approach to the town there was an intermediate space of 80 ft [24 m] at the extremity of which the hill was cut down perpendicularly about 15 ft [4.5 m] (i.e. scarped); and on its summit rose another row of palisading that encircled the hippah and completed the works".

The encircling scarp is clearly that defending the summit enclosure, although Nicholas makes no mention of the associated ditch and bank or the whereabouts of the entrance. It is difficult to determine whether these are casual omissions or whether these incomplete perimeter earthworks were dug after his visit; if so, there will have been three phases of construction. The 'moat' backed by a steep mound 80 ft away and defending an entrance is clearly applicable to the cross-ridge defences. Nicholas' use of the term 'moat', instead of the usual ditch or trench, is apt; according to the Oxford English dictionary a moat is "a wide flat bottomed ditch, usually holding water", which is consistent with the appearance of this earthwork. Nicholas does not say that it actually held water when he saw it in mid-summer but he obviously thought it could. He was wrong because the situation across the ridge makes this impossible, since any water would drain away eastwards down the slope. No mention is made of any terracing or buildings in the space between the summit scarp and the moat; this supports the contention that these were insertions of later date. The palisade described as being 30 ft (*ca.* 9 m) in front of the moat is difficult to identify. Of the three possible slots now discovered across the ridge the innermost is about that distance from the earthwork but it is obscured by being incorporated in a later enclosure; it would need to be longer to provide an effective barrier. The outermost slot is defensively well sited but it is too far away to fit with Nicholas' estimated measurements: presumably it is a later construction.

Another problem is that Nicholas (1817 I:341) refers to a western gate when leaving the pa the next morning for a visit to Lake Omapere. No details are given except that the hill outside was "nearly perpendicular". This well describes the westeren slopes to the Pakonga stream, which would have to be negotiated when travelling in the direction of Omapere, 5 km to the south-west (Figs. 1,2). The exit from the pa would have been by what is here termed the northern gate and through the gap in the palisades at the edge of the scarp (Fig. 5). Since one side of the gate is conjectural, the opening may have been angled to face west and so conform with Nicholas' location.

Marsden's account of Okuratope differs from that of Nicholas. He describes the pa as being enclosed by "three very deep trenches cut round the sides of the hill, one above another, and each trench fenced round with whole or split trees from 12 to 20ft [3.6-6 m] high" (Marsden 1932: 97-9). There is no triple ditch system at

Okuratope, though there were, according to Nicholas, three lines of palisades on the ridge, one external, one on the bank of the 'moat' and one on the summit scarp, with which Marsden may have been confused. He confirms that the entrance to the pa was by a narrow gate where Hongi showed him a small secret corner where he could be concealed and fire upon the enemy (op. cit.: 99). This presumably was beside the northern entrance to the summit enclosure and has disappeared in the later alterations.

THE INTERIOR OF THE PA (Fig. 3)

On the hilltop the ground within the innermost defences was fully taken up by some 35-40 rectilinear enclosures. The layout was very irregular and no logical plan can be discerned. The compounds are defined by shallow gullies or occasionally by low scarps. The sizes and shapes vary: the largest are oblong, 15 x 7 m approximately, the smallest are squarish, 4 x 5 m, but there is no uniformity. Two examples have an angular recess, whilst a detached group of three (south of X, Fig. 3), which are out of alignment with their neighbours, look like a later insertion. In twelve of the compounds there are ruas, circular underground store pits, cut in the hard clay soil, and measuring 1-2 m in diameter at the base. The sides are undercut beneath a small opening at the top, which has usually partly collapsed, and the pit is now filled with a natural accumulation of soil and leafy humus. One rua about 1 m deep now holds water. In most cases there is only one rua in a compound situated at the side, but occasionally there are two and in one compound there are three. In some places the ruas appear to have been dug through the dividing gullies and so may be of later date.

The interpretation of this maze of sub-divisions is fraught with difficulties which can only be solved by the total excavation of select examples, and the location of the houses and other timber structures they must have contained. It it also needed to decide whether the dividing gullies functioned as drains at the edges of the compounds, in the same way as the trench boundaries that define some cultivation plots (Leach 1984:50), or whether they were well-worn sunk paths for the inhabitants to move about the interior of the pa without trespassing on another property. It is proable that they will prove to be a mixture of both. The wider gullies are suggestive of thoroughfares and in three instances they lead to gaps in the perimeter scarp which are possible entrances. Narrow lanes or pathways with stiles to enter the house enclosures were a feature of Rangihoua pa, described by Nicholas (1817 I:174-5, Spencer 1983 :93-4) and may be analogous. A few compounds with a similar trenched outline can be seen at Mawe pa, Lake Omapere (Fig. 1) so these are a local feature (Best 1975 :335 and fig. 92; and personal observation). The friable nature of the clay loam soils on the Okuratope ridge top suggests that the need for drainage was not acute.

Some assistance with interpretation can be gained from the Nicholas and Marsden accounts. Both confirm that the central pa was densely inhabited; Nicholas (1817 I:338) describes it as a town with more than 100 houses and stores, Marsden (1932 :97) as a village of about 200 houses. Both state that the individual houses were fenced round by a strong barrier of stakes but make no mention of drains or pathways. Marsden adds that the roofs were thatched with eaves projecting 3 ft (0.9m) over the sides to carry off the water and keep the buildings dry. Both writers comment on the number of well-built storehouses. Nicholas (1817 I:340) describes one that

had a high door and a verandah around it beneath the 3 ft (0.9 m) eaves and was surrounded by a paling of stakes about 10 ft (3 m) away. This sounds like a *pataka* of the type drawn by Augustus Earle at Pakanae on the Hokianga (Murray-Oliver 1968: Pl. 49), though Nicholas does not say whether it was raised. (Marsden 1932 :99) mentions another building that was 30 ft (9 m) long and 20 ft (6 m) wide that was used as an arms store as well as for provisions. Hongi had shown the visitors some spears that were 23ft (7 m) long (Nicholas 1817 I:340-1) so the size is credible; such a storehouse would have occupied one of the large enclosures. A central arms store adjoining the chief's house was recorded at Paeroa pa, Bay of Islands, when visited by du Fresne in 1772 (Fox 1976: Fig. 40).

One feature impressed both writers, the seat or throne of Kaingaroa, with another beside it for his mother (Nicholas 1817 I:339). This was in the centre of the town at the highest point, "commanding a most extensive view of the surrounding countryside in all directions" (Marsden 1932 :99). The position can now be identified from the plan (Fig. 3) as being somewhere in the irregularly shaped compound south-east of X at *ca.* 190 m ASL. This is large enough to act as a place of assembly, in effect as a *marae,* when the chief sat there "either for business or pleasure just as occasions required his consulting with his people" as Marsden observed. The throne was described as a platform or stage, 20 ft (6 m) by 3 ft (0.9 m), raised 6 ft (1.8 m) above the ground on a single post with decorative carving, with a step to get up, which also acted as a footstool (Nicholas 1817 I:339). This sounds a rather unsteady construction if the measurements are correct and presumably there were additional supports which were not thought worth mentioning. Comparison may be made with a *whata* depicted by Earle which has a substantial anthropomorphic pillar as a main support and a slender pole at the rear (Murray-Oliver 1968 : Pls 7, 52). The chief's lady at Okuratope had her bench seat close by, with her provisions kept in "a little hut about 4 ft [1.2 m] from the ground, 3 ft [0.9 m] long and 2 ft [0.6 m] wide," with an image beside its small door. This must have been a *whata* raised on a pole of the familiar type recorded by Earle in the Bay of Islands (Murray-Oliver 1968 : Pls. 19, 26 and 48), which contained the tapu food for the chief and his relatives. The structures described at Okuratope would require substantial post holes but archaeologically they might be difficult to locate or to distinguish from other constructions in the compound. Lastly Nicholas (1817 I:354) commented on the provision of a latrine to which he was taken after a large meal. It was outside the defensive scarp of the town and through an opening in the palisades, and consisted of a branch of a tree laid horizontally which projected over a cut in the hillside 15ft (4.5 m) deep. On the west side of the pa, overhanging the steep slopes, there are two small terraced platforms that may indicate the place, since they are relatively inacessible and have no obvious defensive use.

THE POPULATION

The population of Okuratope was thought by Nicholas (1817 I:338) to be "from 200 to 300 souls", although he admitted they saw very few of the inhabitants because most of them had gone down to the coast to procure a stock of fish for the winter. He based his estimate on the number of houses and stores, numbering more than one hundred. It has been argued elsewhere (Fox 1983 :7) that a Maori household occupying a terrace in a pa consisted on average of six adults. If the 37 compounds

in the summit enclosure at Okuratope are accepted as the equivalent of terraces on the slopes, this would produce a population of 222 adults, very similar to Nicholas' figure. There is archaeological evidence that the population increased after Marsden's and Nicholas' visit. As already noticed, the zones between the defences, previously open according to Nicholas, were terraced and sub-divided presumably for living quarters, except for the space behind the earthworks needed for mustering the defendants in case of an attack. As the plan (Fig. 3) shows there are ten terraced plots on the east slopes and at least eight on the north-west; these would add about another hundred persons. Since there are also well-defined plots outside the defences on all sides of the pa, the final total may have been greater; it is difficult to distinguish occupation sites from terraced cultivation plots in this area apart from the few with rua pits. Further evidence for the rapid growth of population in the region comes from a later visit by Marsden (1932 :470-74). In March 1830, he again visited Waimate at the request of chief Rewa, the former chief Kaingaroa having died, with the object of finding "a piece of ground for a missionary station and for the purposes of agriculture". The district was then thought to contain about a thousand people "in a number of different establishments belonging to different chiefs" and "within a compass of six miles [9.6 km] round it, there were about a thousand more". These numbers may be exaggerated but the fact that there was a large population in the vicinity, as well as fertile soils, determined the founding of the Waimate mission station in April 1830, *ca.* 2 km north-east of Okuratope.

Chronology

There is only one fixed point in the history of Okuratope, namely the descriptions by Marsden and Nicholas of how they saw it in 1815. There is no suggestion that it was then a recent construction or acquisition of the Ngapuhi chiefs, Kaingaroa and his brother Hongi. It can be inferred that it had been inhabited for at least a generation previously (20-25 years) and therefore probably dates from the late 18th century. It is possible that an earlier date could be established by excavation and radiocarbon analysis, together with an examination of local oral tradition. From the archaeological point of view, the plan is compatible with a late date, since the defences include a ring-ditch and bank, admittedly incomplete, around the main enclosure, as well as strong outer transverse defences on the easiest line of approach (Fig. 5). It is generally accepted that the ring-ditch is a late development, though it is not common in the Bay of Islands: Ngahuha pa, Smith's Road, built at the junction of two volcanic craters is another outstanding example, but is undated.

It is interesting to see how a prehistoric pa of conventional plan was adapted for musket warfare in the early 19th century, as practised by its first Maori exponent, the chief Hongi. Nicholas' account records that 'portholes' (loop holes) for firing, were cut in the palisades. The substantial bank behind the 'moat' across the ridge may have been built to protect the defenders from a return of fire. Hongi also showed Marsden a corner concealed beside the entrance from which he could direct his fire. A possible line of rifle pits was incorporated in the later eastern defences behind the palisade (Fig. 6).

It is not clear when Okuratope was abandoned; the extended pa and external settlements were presumably still in existence, and functioning as a tribal centre in

1830 when Marsden returned to Waimate to negotiate with chief Rewa for land for his new mission station. After the Treaty of Waitangi and the Hone Heke wars of 1845-46 the pa could have served no useful purpose and settlement is likely to have shifted to more accessible places on the nearby plateau.

SUMMARY

The recent survey of Okuratope by Leatherby and Morgan (Figs. 3, 4) has added some new dimensions to the pa; it is a much larger and more complicated site than Kelly's previous plan suggested. The probable lines of external palisades have been identified for the first time and the position of several entrances have been located. Within the main enclosure, the individual living quarters have been defined, some 35-40 compounds outlined by trench boundaries, enabling a rough assessment of the population to be made. A probable place of assembly, a *marae,* has been identified near the highest point. A study of the defences indicates two phases of construction (Figs. 5, 6) with an extension on the east side, which reflects a change in the principal line of approach and potential attack. The development of terracing between the zones of defence as well as outside the pa are evidence for a growth of population during the second phase. There is no archaeological means of dating the construction, pending excavation, but on historical grounds a flourishing occupation is attested in the early 19th century and a late 18th century origin is probable. The terminal date suggested is after A.D. 1830-1840.

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The map and diagrams (Figs. 1, 5, 6) are the work of M. Rouillard, draughtsman in the History and Archaeology Department at Exeter University, England, by kind permission of Professor M. Todd.

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